Parents and Mathematics Education in a Latino Community: Redefining Parental Participation

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Introduction

Rhonda: The good thing about MAPPS is that it [opens] our awareness in math, you know the workshops, it just opens up the doors that we thought were closed especially for me....I think that it is important that I learned that, our kids aren’t really being taught what they are supposed to be taught and that’s one big thing and that parents have a lot of power that we don’t know that we have it, that’s what MAPPS taught me.

Our work aims to expand the vision of parental participation in school mathematics, in particular the role of mothers from diverse ethnocultural and low socioeconomic groups. The experience of some of the mothers has led them to believe, as in the above quote, that their role is limited and that their ability to voice their opinions and concerns is hampered by the traditional school structure.

Through their involvement in MAPPS’ (Math and Parent Partnerships in the Southwest), parents like Rhonda have had experiences that took them through a series of processes that provide us with a different vision for parental participation in mathematics education. This vision is the focus of our article.

The vision consists of four components: Parents as Leaders (e.g., parents become advocates for the education of not only their children but for all the children in the district);

Parents as Parents (i.e., parents originally joined MAPPS because they want to help their children with their mathematics education); Parents as Learners (parents become learners for themselves; some even pursue further education); Parents as Teachers (this is a unique feature—parents become facilitators of mathematics workshops for other parents in the community);

Parents as Advocates for the Education of Not Only Their Children but for All the Children in the District.

This article elaborates on these components based on the parents’ own reflections.

Theoretical Framework

Our work with adults in mathematics draws from three bodies of research. The first one is grounded on socio-cultural theory and in particular on the concept of “funds of knowledge” through which households and communities are seen as having knowledge and resources that can be tapped into for educational purposes (González, 1995; Moll, 1992).

The second body of research combines ethnomathematics and adult education grounded on critical pedagogy (Benn, 1997; Flecha, 2000; Knijnik, 1993). Finally, we draw on research on parental involvement, in particular that which critically examines issues of power and perceptions of parents (especially language and ethnic “minority” and working-class parents) (Delgado Gaitan, 2001; Henry, 1996; Lareau, 2000).

Our approach to parents and mathematics education is grounded on the concept of parents as intellectual resources (Civil & Andrade, 2003), which means that we are particularly interested in parents’ views and understandings of mathematics and that we seek to learn from them and to build our mathematics instruction on these adults’ knowledge and experiences. This is consistent with approaches to parental participation that are largely based on facilitating parents in their empowerment process so that they can effect change, work to challenge the rhetoric of parent involvement, and work to build community action (Delgado Gaitan, 2001).

Method

The research we report in this article took place in a MAPPS school district that is largely Hispanic/Latino (85.4%) and with the majority (77%) of the children on free or reduced lunch. Central to our approach to parental participation is Flecha’s (2000) proposal of engaging in an egalitarian dialogue where each participant has a voice and where contributions are assessed in terms of their content and not in terms of the status of who makes them.
Parents as Parents

Most of the parents said that their children were the primary motivation to join the project. Being a role model or example for their children was important to them, and some felt that it was the best inheritance they were able to give their children, i.e., an understanding and appreciation of the importance of education.

Bertha: A parent role is like a leader, willing to take more risks in our life and also we can be a model for our children. If we have opportunities to grow, if we have some kind of knowledge we can support our kids better and they can see, “Oh my gosh, they’re doing this for themselves and also for me” and they can feel stronger.

The parents often talked about the importance of showing confidence and assurance to their children even when they themselves were not sure of the subject matter. They stressed the value of being positive and resourceful in the search for needed information.

They wanted to learn more about mathematics to be able to help and support their children with that subject, but several of them also brought up the idea of being involved in an educational project to inspire and motivate their children to continue studying.

Esperanza: Yo, para mis hijas, era su líder porque estaba involucrada en MAPPS. Darse cuenta porque estaba con ellas en la escuela también al mismo tiempo. Decían, “mi mamá también va a la escuela.”

(I was my daughters’ leader because I was involved in MAPPS. You know, it was because I was with them in school at the same time. They said, “My mom goes to school too.”)

For many parents, helping their children with mathematics homework can be challenging, especially as their children get older and the mathematics content becomes more specialized. Adding to that challenge is the fact that in many schools, mathematics is taught in ways that are likely to be quite different from what parents experienced when they were in school.

Although this is so whether parents went to school in the U.S. or in Mexico (as is the case for many of the immigrant parents in MAPPS), we argue that for immigrant parents it may become more of a challenge as the differences in approaches come from transnational experiences of learning in mathematics (Ron, 2000). Children are choosing to use English instead of Spanish to get older and the mathematics content becomes more specialized. Additionally, some children have to translate the mathematics taught here is different from what is taught there and so he says why would I ask my mom for help if she’s not going to know. So, there is a barrier.

What is more, there is a growing body of research that suggests that a rift caused by language shift is being created between immigrant parents and their children that may have serious effects on the educational pathways of children (Fillmore, 2000). Children are choosing to use English instead of Spanish, thus limiting the development of their Spanish abilities. In Verónica’s case these factors are at play; her son lacks trust in her ability to help and she is frustrated about her possibilities to help him.

Verónica: Apenas mi hijo esta en 6to y yo no he podido ir con él. Él no siente a la escuela de México no valía lo que vale aquí, o sea, no cuenta. Le gustaba ir a la escuela también, pero el español no está tan amplio. Le dije, “Mami, sabes esto?” “No se la verdad no,” le dije, “Sí, pero…” No sé si le va a pedir ayuda a mi mamá si no sabe. Entonces ahí hay una barrera.

In addition to the differences regarding methods, some children have to translate the problems to their Spanish speaking parents in order to receive their help. This makes the parents’ situation even more difficult since it places the responsibility for explaining and translating on the children. Although the children may use Spanish to communicate, this does not mean that they will be able to use it to construct meaning in mathematics (Ron, 2000). Parents as Parents
y no sé si estoy seguro que yo voy a entender ni que él me va a traducir como me debía traducir para que yo pueda ayudar.

(My son is just in 6th grade and I didn't think this was going to happen, he doesn't like it either. He's not sure of me because I don't speak English and he's not sure I am able to help him. “Son, it’s mathematics.” “Yes, mom, but...” I don’t know if it’s laziness or maybe he just doesn’t find the words—he knows Spanish, but when kids learn Spanish here their vocabulary is not as developed and he’s not sure I’m going to understand so he doesn’t translate like he should so I’m able to help him.)

Parents as Learners

MAPPS was designed to engage parents in the exploration of standards-based mathematics. Group work, hands-on materials, and discussion of different approaches for a given problem were characteristics common to most MAPPS activities. Parents often commented on how this approach differed from what they had experienced as school children.

One salient aspect is the fact that these parents want to learn mathematics. Their questions and participation in the MAWS and the Math for Parents courses reveal a strong interest in understanding what is going on and not just in going through the motions. That approach is no longer satisfactory to most of the parents, although many of the parents did in fact learn in that manner:

Marisa: I can memorize formulas and so that’s how I did the math, but it never clicked why until I took some of the MFP courses. A couple of the instructors were proving the theorems or whatever we were doing at the time, and then I said, “oh, that’s why,” and it made so much more sense and I said, “okay, wow, now I know why I was doing that.” I wasn’t just blindly memorizing facts.

And another mother stated,

MAPPS has been very different from my previous experience with math. I went through my whole life being told how things were not and not given any freedom to figure it out on my own.

Many of the parents have experienced frustration with mathematics in the past. Some of them are outspoken about their change in attitude since their participation in MAPPS. They have developed more confidence and a better understanding of what mathematics entails. For some it has awakened a thirst for learning.

Esperanza: ¡No me gustaban! Si ves el video de las primeras entrevistas que me hacían, te decía—yo no sé que estoy haciendo aquí, si a mi nunca me han gustado las matemáticas. Pero ya después cuando fui conociendo más de mate-mática, y estudiando más a fondo, es como una droga. Entonces más números, ¡más números quieres sumar! Le decía yo a Marta, me estás haciendo adicta a las matemáticas (risas).

I didn’t like mathematics! If you see the video of the first interviews, I said, I don’t know what I’m doing here, if I have never liked mathematics. But after I started getting to know more about mathematics and studying more in-depth, it’s like a drug. You take in more and more numbers and you want to add up more numbers! I said to Marta, you’re making me a mathematics addict (laughter).

Parents as Teachers

After their first year in the program, many parents in the leadership teams began facilitating workshops (MAWS) for other parents in the school district community. Although many of them shared that they were very nervous in this new role, their enthusiasm to teach other parents became stronger and a central drive. Parents became aware of their knowledge and the need to collaborate with the schools. MAPPS established a system that challenged the traditional role of parents as listeners or “students.” Parents were eager to collaborate to support this approach to parental participation.

Truthfully, I thought that [MAPPS] was to help me, but I didn’t know that I was going to get so involved or that I was going to learn so much that I wouldn’t just use it for me but that I would take it to others.

Jillian: What we learned ourselves...we can give back and then they can give and they can give and hopefully this will just keep going and going, even when our kids are gone.

Having parents teach other parents is similar to having teachers teaching teachers in university-run professional development programs. The teachers in those programs are often very grateful to have teachers teaching because they understand their professional reality much better than university professors do. The same is true of parents: they understand where other parents are coming from, and they know how to connect with them.

Esperanza: ... give them confidence by
telling them that I am also a mother...that I may also have doubts and that we are ready to explain something again when they do not understand it. In conclusion, the important thing is to make them feel confident.

Jillian: ...parents know that I am teaching but they are teaching me too, not to make them feel like dummies. Let them contribute as much as I am contributing.

The next two quotes capture how strongly these mothers understood this particular goal of MAPPS and how powerful it is to have parents teaching other parents:

Jillian: ...the whole object of MAPPS was for parents to come in and teach other parents, so they didn't feel so uncomfortable, intimidated...teachers can come in and teach because that's what they do, but when you have another parent come in teaching you...you can absorb a lot more.

Bertha: The point is be part of the school, be part of the community like parents, not like students for the teachers even though you kind of learn through MAPPS...to me the main point was parent involvement...to me the point of MAPPS was using the parents, using in the right way, using parents to teach other people.

Parents as Leaders

One of MAPPS' goals was leadership development. One clear level of leadership was manifested in the different roles that parents took. Some of them became MAW facilitators and a few of them became mentors of the facilitating teams. This level of leadership is quite different from monitoring the school cafeteria, helping with bulletin boards, or doing school fund raising, forms of parental involvement that we have seen in our local context with low-income, ethnic/language "minority" parents (Civil & Andrade, 2003).

Challenging the established roles by having parents become "teachers" is not unproblematic. The expansion of the definition of parent-teacher roles and relationships is a critical component towards parents' inclusion in leadership roles.

As we reflect on some of the issues related to expanding this definition, we realize that MAPPS did not do enough to break existent unequal power relations and to develop a dialogue between parents and teachers (see Bernier, Allex-saat-Snider, & Civil, 2003; Civil, Bernier, & Quintos, 2003). For example, Marisol, a participant who always embraced the project with great enthusiasm, reflected on the relationship with the teachers, when she first became a MAW facilitator:

Marisol: It was hard in the beginning to work with the teachers. "They are the best." They don't give you the opportunity that you may know more or bring other ideas. Now we are more equal. Before [with her hands she indicates parents in the team were at a lower level than teachers], but now [she indicates they are at the same level]. Now they rely on me, they check with me, they make you feel that you are important to them. One teacher once told me "you just hand out papers" and I was upset. [Then she goes on to explain how in a more recent MAW she took the lead of the presentation.]

In discussing parents' and teachers' role in MAPPS, Jillian stated that parents are the only way to make sure it is a continued effort.

The teachers may come and go, but they are not going to take it (the school) with them, it's going to stay right where it is, so we have to make it stronger and stronger, but if you start putting people in there that are going to leave (referring to teachers) then where is the leadership? It's gone or it's real thin.

The parents in MAPPS were aware of their critical role in the improvement of their children's education. Some of the parents took action and ensured that their children were assigned to specific teachers or questioned their children's educational placement when they did not agree. A clear example of what MAPPS could do in terms of raising parents' awareness about mathematics education was the case of Esperanza.

When she realized that her daughter's teacher was not teaching as much mathematics (and at a much lower level) as another teacher in the same school, she was able to place her daughter with this teacher just for mathematics. But we wonder, as these parents become more informed about mathematics issues and more exposed to different approaches to mathematics teaching and learning, will they become more active as advocates for a quality mathematics education for all children? How can leadership roles for parents be expanded to lead to action beyond their own children?

In our more recent work in which we have emphasized an egalitarian dialogue and the critical discussion of issues related to mathematics education in general, we have made some strides towards the concept of community action, as the quote below captures. In it, Verónica challenged the group to move from actions that benefit their own children to "community actions" or actions that would benefit the larger population of the district.

Verónica: The point is be part of the school, ...parents know that I am teaching my child, mine. But that that doesn't mean the success of a district, of a school. No, not of the district nor the school.

Conclusion

The vision for parent participation described in this article is grounded on the concept of parents as intellectual resources. This vision calls for parents' engagement in academic spaces (Calabrese Barton, Drake, Perez, St. Louis, & George, 2004).

We argue that engaging parents in an academic subject such as mathematics that is quite "charged" (e.g., consider the role it plays in standardized testing and graduation exit exams) and often functions as a gatekeeper (and in particular in contexts such as ours with Latino, low-income students), may open the door towards action. That action may be at the individual level at first (e.g., advocating for their own children), but through dialogue and group reflection can lead to community action (Bratton, Quintos, & Civil, 2004).

As Bourdieu (1986) points out, the difference in distribution of cultural capital and how each group's capital is valued by the dominant group may explain some of the differences in children's school achievement. The four components in parents' participation in mathematics education described in this paper provide a mechanism to address this inequity in how the different forms of capital among low-income, ethnic/language "minority" families is perceived by schools.

Notes

1 We use the term "parent" to refer to any significant adult in the child's life. Although in our project, most participants have been the...
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References